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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,814	10/30/2003	Hugh S. Njemanze	25137-11333	2475

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EXAMINER

KIM, PAUL

ART UNIT	PAPER NUMBER
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2161

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/698,814

Applicant(s)

NJEMANZE, HUGH S.

Examiner

Paul Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13 and 24-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13 and 24-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


SAM RIMELL
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/8/06, 6/26/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is responsive to the following communication: Amendment filed on 29 July 2006.

Response to Amendment

2. Claims 13 and 24-44 are pending and present for examination.
3. Claims 1-12 and 14-23 have been cancelled.
4. Claims 24-44 have been added as new.

Information Disclosure Statement

5. The information disclosure statements (IDS) submitted on 8 May 2006 and 26 June 2006 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements have been considered by the examiner.

Drawings

6. The drawings were received on 29 July 2006. These drawings are acceptable.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 13, 24, 25, 27, 30-37, and 40** are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniel (U.S. Patent No. 5,321,837, hereinafter referred to as DANIEL), filed on 11

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October 1991, and issued on 14 June 1994, in view of O'Hair (U.S. Patent No. 5,187,789, hereinafter referred to as O'HAIR), filed on 11 January 1991, and issued on 16 February 1993.

9. **As per independent claim 13**, DANIEL, in combination with O'HAIR, discloses:

A method of displaying an expression being capable of representation in infix and prefix notation, and comprising a plurality of operators and operands, the method comprising:

displaying the expression {See O'HAIR, Figures 4c and 5e} as a prefix expression tree {See DANIEL, Figure 6}, wherein the plurality of operands comprise the leaves of the expression tree; and

inserting a plurality of infix operators corresponding with the plurality of operators into the prefix expression tree {See DANIEL, col. 4, lines 62-67, wherein this reads over "a generic parser which first converts the expression into an infix binary expression tree containing relational and Boolean operators. The filter table parser then converts the tree into a prefix data stream for high performance string-based evaluation"}, wherein, the plurality of operands and infix operators represent the expression in infix notation {See DANIEL, Figures 5-6; and col. 4, line 67 – col. 5, line 2, wherein this reads over "a single stream prefix expression that contains a length, a Boolean or relational operator"}.

The combination of the inventions disclosed in DANIEL and O'HAIR would disclose a method of displaying an expression being capable of representation in infix and prefix notation. While O'HAIR does not specifically disclose that the expression be in prefix and infix notation, it would have been obvious to one of ordinary skill in the art at the time the invention was claimed to display infix and prefix binary expression trees as disclosed in DANIEL. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions suggested by DANIEL and O'HAIR.

One of ordinary skill in the art would have been motivated to do this modification so that the infix and prefix notation expressions may be displayed to a user.

10. **As per independent claims 24 and 36**, DANIEL, in combination with O'HAIR, discloses:

A user interface for representing an expression, comprising:

A graphical representation of a tree that represents the expression containing:

A root node that includes a first operator of the expression {See O'HAIR, Figure 4c};

A plurality of internal nodes that include a plurality of operators of the expression {See O'HAIR, Figure 4c}; and

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A plurality of leaf nodes that include a plurality of operands of the expression {See O'HAIR, Figure 4c}; and

A plurality of symbols, adjacent to the plurality of operands in the tree, the plurality of symbols and the plurality of operands representing the expression in infix notation {See DANIEL, Figure 6, wherein this reads over "**OR *EQ *FRUIT 'APPLE' *EQ *FRUIT 'Pear'"}.

The combination of the inventions disclosed in DANIEL and O'HAIR would disclose a user interface comprising of a graphical representation of a tree and a plurality of symbols and operands. While O'HAIR does not specifically disclose that the expression be in prefix and infix notation, it would have been obvious to one of ordinary skill in the art at the time the invention was claimed to display infix and prefix binary expression trees as disclosed in DANIEL through the user of a user interface as disclosed in O'HAIR. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions suggested by DANIEL and O'HAIR.

One of ordinary skill in the art would have been motivated to do this modification so that the infix and prefix notation expressions may be displayed graphically for users.

11. **As per dependent claim 25, DANIEL, in combination with O'HAIR, discloses:**

The user interface of claim 24, wherein the expression comprises a Boolean expression {See DANIEL, Figures 5-6}.

12. **As per dependent claim 27, DANIEL, in combination with O'HAIR, discloses:**

The user interface of claim 24, wherein a first portion of the user interface includes the plurality of operators, and wherein a second portion of the user interface includes the plurality of operands and the plurality of symbols, and wherein the first portion and the second portion do not overlap {See O'HAIR, Figure 4C, wherein the operators are displayed in a different portion of the user interface from the operands and plurality of symbols; and DANIEL, Figure 6}.

13. **As per dependent claim 30, DANIEL, in combination with O'HAIR, discloses:**

The user interface of claim 27, wherein the plurality of symbols includes an infix operator {See DANIEL, Figure 6, wherein this reads over "**OR *EQ *FRUIT 'APPLE' *EQ *FRUIT 'Pear'"}.

14. **As per dependent claim 31, DANIEL, in combination with O'HAIR, discloses:**

The user interface of claim 30, wherein the infix operator is located in the second portion of the user interface adjacent to an operand {See O'HAIR, Figure 4C, wherein the operators are displayed in a different portion of the user interface from the operands and plurality of symbols; and DANIEL, Figure 6}.

15. **As per dependent claim 32**, DANIEL, in combination with O'HAIR, discloses:

The user interface of claim 24, wherein an operator of the plurality of operators is displayed symbolically {See DANIEL, Figure 6, wherein the "EQUAL" or "=" function is represented by "EQ"}.

16. **As per dependent claim 33**, DANIEL, in combination with O'HAIR, discloses:

The user interface of claim 24, wherein an operator of the plurality of operators is displayed textually {See DANIEL, Figure 5, wherein the "AND" function is displayed textually as "AND"}.

17. **As per dependent claim 34**, DANIEL, in combination with O'HAIR, discloses:

The user interface of claim 24, wherein the plurality of operators includes a logical operator {See DANIEL, Figure 6, the "*OR" operator}.

18. **As per dependent claim 35**, DANIEL, in combination with O'HAIR, discloses:

The user interface of claim 24, wherein an operand of the plurality of operands includes an expression that includes a comparative operator {See DANIEL, Figure 6, the expression which contains an "*EQ" operator}.

19. **As per dependent claims 37 and 40**, DANIEL, in combination with O'HAIR, discloses:

The method of claim 36, further comprising:

receiving data indicating a change to the first portion of the user interface {See O'HAIR, col. 8, lines 21-27, wherein this reads over "user can place the cursor over any element shown in panel and the system automatically replaces the return node with the newly selected node"}; and

updating the second portion of the user interface based on the received data {See O'HAIR, col. 8, lines 21-27, wherein this reads over "user can place the cursor over any element shown in panel and the system automatically replaces the return node with the newly selected node"}.

20. **As per dependent claim 44**, DANIEL, in combination with O'HAIR, discloses:

A network security system, comprising:

A plurality of agents to collect security events from a plurality of network security devices {See DANIEL, Figures 1 and 3};

A manager including a rules engine to correlate the collected security events according to a set of rules {See DANIEL, Figures 4-5}; and

A console interface to edit a rule from the set of rules using a user interface, the user interface comprising {See DANIEL, Figure 5};

A graphical representation of a tree that represents the expression containing:

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A root node that includes a first operator of the expression {See O'HAIR, Figure 4c};

A plurality of internal nodes that include a plurality of operators of the expression {See O'HAIR, Figure 4c}; and

A plurality of leaf nodes that include a plurality of operands of the expression {See O'HAIR, Figure 4c}; and

A plurality of symbols, adjacent to the plurality of operands in the tree, the plurality of symbols and the plurality of operands representing the expression in infix notation {See DANIEL, Figure 6, wherein this reads over "*OR *EQ *FRUIT 'APPLE' *EQ *FRUIT 'Pear'"}.

21. **Claims 38, 39, and 42** are rejected under 35 U.S.C. 103(a) as being unpatentable over DANIEL, in view of O'HAIR, and in further view of Official Notice.

22. **As per dependent claim 38**, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make changes to an expression by inserting or deleting an operator.

23. **As per dependent claim 39**, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a portion of the user interface reflect changes to an expression by updating a symbol.

24. **As per dependent claim 42**, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a graphical representation of a tree updated to reflect changes made.

25. **Claim 43** is rejected under 35 U.S.C. 103(a) as being unpatentable over DANIEL, in view of O'HAIR, and in further view of Wiegel (U.S. Patent No. 6,484,261, hereinafter referred to as WIEGEL), filed 11 December 1998, and issued on 19 November 2002.

DANIEL and O'HAIR teach the limitations of claims 13, 24, 25, 27, 30-37, and 40 for the reasons stated above.

DANIEL and O'HAIR differ from the claimed invention in that they fail to disclose a method comprising displaying an expansion box, associated with an operator, configured to toggle between showing or hiding operands of the associated operator (claim 43).

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26. **As per dependent claim 43**, DANIEL, in combination with O'HAIR and WIEGEL, discloses an expression editor, wherein each operator of the expression tree has a corresponding expansion box {See WIEGEL, Figures 3 and 9} that is operable by a user to show or hide the operands of the corresponding operator.

The combination of the inventions disclosed in DANIEL, O'HAIR, and WIEGEL would disclose an expression editor, wherein each operator of the expression tree has a corresponding expansion box (i.e. the box icons which collapse/expand the tree upon a user's click) that is operable by a user to show or hide the operands of the corresponding operator. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions suggested by DANIEL and WIEGEL.

One of ordinary skill in the art would have been motivated to do this modification so that operands of the corresponding operator may be hidden or shown at the user's election.

27. **Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over DANIEL, in view of O'HAIR, and in further view of Ahlstrom et al (U.S. Patent No. 6,301,613, hereinafter referred to as AHLSTROM), filed on 3 December 1998, and issued on 9 October 2001.

DANIEL and O'HAIR teach the limitations of claims 13, 24, 25, 27, 30-37, and 40 for the reasons stated above.

DANIEL and O'HAIR differ from the claimed invention in that DANIEL fails to disclose an expression editor wherein the Boolean expression comprises a rule in a network security system (claim 26).

28. **As per dependent claim 26**, DANIEL, in combination with O'HAIR, discloses:

The user interface of claim 25, wherein the Boolean expression comprises a rule in a computer network security system {See AHLSTROM, col. 6, lines 24-36, wherein this reads over "a Policy Condition is a Boolean expression defining the situation under which the policy system is to attempt to establish the consequent A Policy Consequent is a state of affairs that is to be brought about when the policy condition is satisfied, or an action that is to be taken or attempted when the policy condition is satisfied"}.

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The combination of inventions disclosed in DANIEL, O'HAIR, and AHLSTROM would disclose an expression editor, wherein the Boolean expression comprises a rule in a network system (i.e. a Policy condition which polices certain "Policy Consequents"). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions suggested by DANIEL, O'HAIR, and AHLSTROM.

One of ordinary skill in the art would have been motivated to do this modification so that the Boolean expressions claimed in the invention may be used to police a network security system.

29. **Claims 28, 29, and 41** are rejected under 35 U.S.C. 103(a) as being unpatentable over DANIEL, in view of O'HAIR, and in further view of Coden et al (U.S. Patent No. 6,263,328, hereinafter referred to as CODEN), filed 9 April 1999, and issued on 17 June 2001.

DANIEL and O'HAIR teach the limitations of claims 13, 24, 25, 27, 30-37, and 40 for the reasons stated above.

DANIEL and O'HAIR differ from the claimed invention in that DANIEL and O'HAIR fail to disclose the user of open parenthesis (claims 28 and 29).

30. **As per dependent claim 28**, DANIEL, in combination with O'HAIR and CODEN, discloses:

The user interface of claim 27, wherein the plurality of symbols includes an open parenthesis that indicates an order of operations {See CODEN, Fig. 15A}.

The combination of invention disclosed in DANIEL, O'HAIR, and CODEN would disclose open parenthesis are used to indicate an order of operations. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions suggested by DANIEL, O'HAIR, and CODEN.

One of ordinary skill in the art would have been motivated to do this modification so that the expression may be processed according to the order set by the parentheses.

31. **As per dependent claim 29**, DANIEL, in combination with O'HAIR and CODEN, discloses:

The user interface of claim 27, wherein the open parenthesis is located in the second portion of the user interface adjacent to an operator {See CODEN, Fig. 15A}.

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The combination of invention disclosed in DANIEL, O'HAIR, and CODEN would disclose open parenthesis which may be located in the second portion of the user adjacent to an operator. While the use of open parenthesis is not specifically disclosed in DANIEL or O'HAIR, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include open parenthesis in the graphical representation of the expression on a user interface to indicate the order of operations. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions suggested by DANIEL, O'HAIR, and CODEN.

One of ordinary skill in the art would have been motivated to do this modification so that the expression may be processed and displayed according to the order set by the parentheses.

32. **As per dependent claim 41**, DANIEL, in combination with O'HAIR and CODEN, discloses:

The method of claim 40, wherein the change to the second portion includes one of an insertion of a parenthesis and a deletion of a parenthesis (See CODEN, Figures 15A, 15C-1, and 15C-2)

Response to Arguments

33. Applicant's arguments, see pages 10-12, filed 29 July 2006, with respect to the rejection(s) of claim(s) 13 under Daniel have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of aforementioned prior art.

Conclusion

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Kim whose telephone number is (571) 272-2737. The examiner can normally be reached on M-F, 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christian Chase can be reached on (571) 272-4190. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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